



# UNITED STATES PATENT AND TRADEMARK OFFICE

A  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,529	10/27/2002	Sezen Uysal	PAX-110	2149
39013	7590	11/17/2005	EXAMINER	
MOAZZAM LATIMER LLP			PRIETO, BEATRIZ	
1474 NORTH POINT VILLAGE CENTER #320			ART UNIT	PAPER NUMBER
RESTON, VA 20194-1190			2142	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/065,529	UY SAL, SEZEN	
	<b>Examiner</b> Prieto B.	<b>Art Unit</b> 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 October 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 October 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.



***DETAILED ACTION***

1. This communication is in response to Application No. 10/065,529 filed October 27 2002, claims 1-30 have been examined.
2. Claims 1 and 10 at least are objected to due to the following informalities: (i) the use of recited acronyms “DNS” and “OSI” in claims should be spelled out where initially recited; (ii) claims 15 and 29, recite the clause “DNS user”, this lacks antecedent basis. Correction is required.

***Claim Rejection under 35 USC §103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13, 15-27, and 29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Optimizing ISP Networks and Services with DNS Redirection, Alteon Web Systems, Inc., White Paper, Aug 1999, p. 1-13 (referred to as Alteon hereafter) in view of An architecture for WAN Load Balancing, Jingsha He, IEEE, 0-7803-6283-7, 2000, p. 1169-1173.

Regarding the apparatus claim 1 and the method claim 17, Alteon teaches an apparatus (e.g. node shown of Figs. 1-5) comprising:

a network node (e.g. ISP node) comprising a web switch with at least two network interfaces comprising switch ports (p. 8) interconnecting via a data path subscribers computers to the Internet and to DNS servers as shown e.g. on Fig. 1 (p. 2);

examines intercepted “captured” data packets through the network interfaces (p. 2);

the network node is configured to manipulate (modify) packets (p. 3); and

the network node is configured to direct the user to the optimum server (p.13); however Alteon does not explicitly teach manipulating the packets according to the user’s location to direct the user to an optimum server.

He teaches a manipulating to reflect (modifying) the response to reflect the optimum server selection (left column p. 1172), a selector having routing functions and a server making use of DNS (right column p. 1170).

The selector selects for a user's DNS request through DNS redirection the best (optimum) server (p. right column 1170), the best is select based on the relativity between the geographical locations between the servers and the user, where the server closest to the user is selected (right column, p. 1171); the optimum server is determined based on the geographical location of the servers to the user (left column, p. 1171); and returning the address in said reply to the user (left column, p. 1172) by manipulating to reflect (modifying) the response to reflect the optimum server selection informed to the user (left column p. 1172).

It would have been obvious to one of ordinary skill in the art at the time the invention was made given the teachings of Alteon for redirecting traffic in a client-server environment, the teachings of He would readily apparent. One of ordinary skill would be motivated to given the suggestion of configure a node having routing functions to operate making isolate the subscriber's DNS server configuration configuring the server to capture all DNS service request and configured to direct traffic to a specific site close to the user, to utilize the teachings of He, including the functions disclosed in the routing component, because in doing so, the node can be configured to take in account other dynamic factors beside the closest server which can be combined to include network traffic conditions and fault tolerant reliability measures as suggested by He.

Regarding claim 2, the optimum location is the geographically the closest one (Alteon: p. 4 and 13).

Regarding claims 3-4, wherein the optimum location is that of geographically the closest server which has been determined serving user's request "healthy and actively serving" as those that "timely and correctly" response to users request (Alteon: p. 2, 6 and 8).

Regarding claim 5, a preferred location chosen by a human operating the ISP (Alteon: p. 5).

Regarding claim 6, the location of a network service is one of the locations of many mirrored sites (servers) that are connected via a network (Alteon: p. 5).

Regarding claims 7-8, wherein a network service is an Internet network service and wherein a network service is an enterprise network service (Alteon, Figs. 1-5).

Regarding claim 9, the optimum process selection is made by a set of rules to the selection process (He: selection criteria, p. 1171).

Regarding claim 10, this method claim corresponds to the apparatus claim 1, discussed above, same rationale of rejection is applicable.

Regarding claim 11, wherein “transparently” altering DNS messages is to capture and to modify the content of the DNS messages (He: left column, p. 1172), the node configured to operating at OSI model's second layer, the user is not aware of the operations occurring on said network node (Alteon: p. 11).

Regarding claim 12, the network node is a device (e.g. a switch) attached to networks, captures every packet detected on any of its interfaces via at least two network interface switch ports (Alteon: p. 8) interconnecting via a data path subscribers computers to the Internet and to DNS servers as shown e.g. on Fig. 1, p. 2).

Regarding claim 13, examine the packet, using layer-2 (Media Access Control (MAC) addresses and Layer-3 (IP addresses) (Alteon: p. 2).

5. Claims 14 and 28 are rejected under 103(a) as being unpatentable over Alteon in view of He in further view of Macpherson et. al. US 6,845,400 (Macpherson hereafter).

Regarding apparatus claims 14 and method claim 28, wherein the network node determines the source IP address of the captured DNS message and consults its previously built database to determine the geographical location of the user that has sent the DNS message.

Macpherson teaches the use of a table with user location information, where the user's location is derived from the content of the user's request in conjunction with the database(s) comprising a mapping between the IP address to the location. Upon user's request the table is interrogated to retrieve the user's location.

It would have been obvious to one of ordinary skill in the art at the time the invention was made given the suggestion of Alteon for providing services based on the user location, the teachings of Macpherson for accessing location based Internet services would have been readily apparent. One would be motivated to combine the teaching of Macpherson with Alteon because in doing so the methods

makes use both of information already readily available and of the existing infrastructure to provide location-based services and the method may be implemented without active user initiation.

Regarding claim 15, wherein the network node modifies the captured DNS messages according to the geo-location of the DNS user to inform the user with the IP address of the optimum server (He: manipulating to reflect (modifying) the response to reflect the optimum server selection informed to the user, left column p. 1172).

Regarding claim 16, the network node forwards every packet, which is not a DNS message to the other interface (Alteon: p. 2).

Claim 17<sup>(B)</sup> discussed above.

Regarding claims 18-30, these claims are the same as claims 2-10 and 13-16, same rationale of rejection is applicable.

**Citation of Pertinent Art:**

6. The following prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Copies of Non-Patent Literature documents cited will be provided as set forth in MPEP§ 707.05(a):

Enhancing Web User Experience with Global Server Load Balancing, Alteon Web Systems, Inc., White Paper, June 1999, p. 1-7.

Alteon Web systems discloses, a Web switch (network node) receiving a DNS request, it recognizes the geographic source of the request by inspecting the source IP address of the request. It then consults the relative traffic distribution table (described later) for that geographic area to determine which site within the area the DNS response should indicate. When a Web switch (network node) at a distributed site receives a DNS query to resolve a hostname from a downstream DNS server, it determines to which geographic region the requesting host belongs. It then checks to see if any healthy distributed sites are present in that region. If there are none, it looks for healthy distributed sites in other regions.

US 6,415,323

McCanne et. al. Teaches a network node comprising a router, i.e. having at least two network interfaces connected to the network through which data packets are received and transmitted; capturing data packet, analyzing captured data packets; determining the requesting host's location and directing the requesting host to the optimum server.

US 6,829,654

Jungck teaches network node comprising a router, i.e. having at least two network interfaces connected to the network through which data packets are received and transmitted; capturing data packet, analyzing captured data packets; determining the requesting host's location and directing the requesting host request to the optimum server.

Cisco DistributedDirector, Delgadillo, K., Cisco IOS Product Marketing, 1999, p. 1-19.

Cisco teaches transparently redirecting end-user service request to the closest server as determined by the client-server topological proximity, redirecting the client to the topological closest server, wherein an DNS response directs the client to the predetermined "best" server.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (571) 272-3902. The Examiner can normally be reached on Monday-Thursday from 6:30 to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Andrew T. Caldwell can be reached at (571) 272-3868. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free)).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

Hand carried or delivered to:

Customer Service Window located at the Randolph Bldg.  
401 Dulany St.  
Alexandria, VA 22314

Faxed to the Central Fax Office:

(703) 872-9306 (old No. in service until Sept. 15, 2005),  
(571) 273-8300 (New Central Fax No.)

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.

B. Prieto  
Primary Examiner  
TC 2100  
November 11, 2005

*Beatriz Prieto*  
BEATRIZ PRIETO  
PRIMARY EXAMINER